



REMARKS/ARGUMENTS

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Rejection Under 35 USC 112, Second Paragraph

Claims 1 and 2 have been rejected under 35 USC 112, second paragraph. This rejection has been obviated by the claim amendments set forth above.

Rejection Under 35 USC 102

Claims 1 and 2 have been rejected under 35 USC 102(b) as anticipated by Bernstein et al. (US Patent No. 5,648,061, herein referred to as '061). More specifically, the Patent Office states:

As indicated in the specification, it was well known that UV irradiation of cells causes formation of reactive oxygen species. Thus, even though Bernstein does not disclose this characteristic of UV irradiation, the characteristic is inherent, and disclosure of UV irradiation and the means therefor meets the limitation of the claims for "means for generating reactive oxygen species."

This rejection has been obviated by the Claim amendments set forth above. More specifically, Claims 1 and 2 have been amended to recite the limitation that reactive oxygen species are generated at levels sufficient for upregulating human elastin promoter activity. It is generally understood by one of skill in the relevant art that radiation effects from UVB exposure primarily result from DNA damage. While radiation effects from UVA exposure are known to primarily result from the generation of reactive oxygen species, Bernstein et al. (US Patent No. 6,018,098, herein referred to as '098) discloses that exposure to UVA alone is not sufficient to upregulate elastin promoter activity (column 4, lines 48-50). It can readily be deduced from the combined teachings of the '061 and '098 patents that the levels of free radicals generated by UV exposure are not sufficient to upregulate human elastin promoter activity. The effects on elastin promoter activity in the '061 and '098 patents instead are attributed to UV effects from DNA damage.

Claims 1 and 2 have further been rejected under 35 USC 102(e) as being anticipated by the '098 patent. More specifically, the Patent Office states:

The disclosed method involves treating the fibroblasts with either UVB radiation or with a combination of UVA radiation and 8-MOP in the presence and absence of a test compound and comparing expression from the elastin promoter, as measured by the level of reporter gene expression...Thus, even though Bernstein does not disclose the characteristic of UV irradiation, the characteristic is inherent, and the disclosure of UV irradiation and the means therefor meets the limitation of the claims for "means for generating reactive oxygen species."

This rejection has been obviated by the Claim amendments set forth above. More specifically, Claims 1 and 2 have been amended to recite the limitation that reactive oxygen species are generated at levels sufficient for upregulating human elastin promoter activity. As stated above, it is generally understood by one of skill in the relevant art that radiation effects from UVB exposure primarily result from DNA damage. While radiation effects from UVA exposure are known to primarily result from the generation of reactive oxygen species, the '098 patent discloses that exposure to UVA alone is not sufficient to upregulate elastin promoter activity (column 4, lines 48-50). The level of reactive oxygen species generated by UVA exposure, therefore, is not sufficient to upregulate human elastin promoter activity. It is further understood by one of skill in the relevant art that effects from the combined treatment of UVA plus 8-MOP primarily result from DNA damage and not from the creation of reactive oxygen species. The effects on elastin promoter activity in the '098 patent, as in the '016 patent, is instead attributed to effects from DNA damage.

Claims 1 and 2 have been rejected under 35 USC 102(f) because applicant did not invent the claimed subject matter. More specifically, the Patent Office states:

Bernstein and Uitto jointly invented the subject matter claimed in the '061 and '098 patents described above, as claimed in claim 2 of each patent. This patented subject matter is embraced by the instant claims.

For the reasons discussed above in connection with the rejections under 35 USC 102(b) and (e), it is respectfully submitted that this rejection has been obviated by the Claim amendments set forth above.

Claims 1 and 2 have been rejected under 35 USC 102(b) as anticipated by WO 96/37237. For the reasons discussed above in connection with the rejections under 35 USC 102(e), it is

respectfully submitted that this rejection has been obviated by the Claim amendments set forth above.

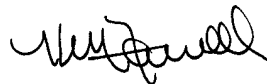
Double Patenting

Claims 1 and 2 have been rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claim 2 of each of the '016 and '098 patents. For the reasons discussed above in connection with the rejections under 35 USC 102(b) and (e), it is respectfully submitted that this rejection has been obviated by the Claim amendments set forth above.

Summary

In light of the above amendments, consideration of the subject patent application is respectfully requested. Any deficiency or overpayment should be charged or credited to Deposit Account No. 500282.

Respectfully submitted,



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